

EXHIBIT B

Marketing the Benefits of ReFlow to Investors

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Research

Marketing the Benefits of ReFlow to Investors

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Mutual funds provide a diversified portfolio of all shapes to investors of all sizes – a portfolio that investors can enter and exit at will, often at little or no cost. This feature is arguably the driving force behind the phenomenal success of open-end mutual funds.¹ However, servicing investors' liquidity demands is not as costless as it might appear to the investor. There are several ways in which servicing investors' liquidity demands impairs investment performance.

- It forces trading to invest new cash or to liquidate for cash shortfalls.² This "liquidity trading" serves no performance-enhancement purpose. If anything, it **compromises the fund manager's efforts to enhance performance** in that it conflicts with strategic objectives. Moreover, finding a counter party to any trade is costly, generally requiring both a **price concession and brokerage commissions**.
- Most funds hold a cash buffer to facilitate investor liquidity, largely as a means of avoiding the aforementioned costs of trading. A cash buffer hurts performance in two ways. First, it acts as a **drag against stocks' long-run tendency to outperform** other investments.³ Second, it leads to fluctuations in the fund's market exposure that are driven by trends in investor purchases and redemptions. These fluctuations induce a "market timing" on the fund's performance that is beyond the control of the fund manager. As it turns out, that **market timing is detrimental**: the fund ends up holding more cash in up markets than in down markets. That is, it underweights stocks when they are rising and overweights stocks when they decline.⁴

These factors cause an erosion of fund assets that is directly proportional to the quantity of liquidity service that the fund provides. For the typical fund, this means a performance erosion of about one percent of assets or more per year.⁵

What does this hidden cost of liquidity mean to the investor? Let's take a 45 year old saving \$100,000 15 years out for retirement and college tuition. Eliminate the hidden costs of liquidity and the expected pot of gold at 60 is \$520,700.⁶ Factor in a one percent erosion in performance and that expected pot of gold erodes to \$448,200, seventy-two thousand less.

ReFlow is a back-office solution that substantially eliminates the problems – and costs – associated with servicing liquidity, by smoothing out fluctuations caused by investors' random liquidity needs. Knowing that your fund manager has partnered with ReFlow means knowing that the hidden costs of liquidity are being dealt with, making you hundreds, thousands, or tens of thousands of dollars better off when it comes time to reap your investment pot of gold.

One final point: it is generally not in the investor's best interest to reduce all costs associated with managing a fund. In addition to the cost of servicing liquidity, other costs include advisory fees and costs of research. These costs are directly applied to improving fund performance. By contrast, liquidity costs are simply a dead-weight drag on performance. Thus, a prudent fund manager eliminates liquidity costs even when maintaining those costs that contribute to the quality of the investment product.

1 The Investment Company Institute, a mutual fund trade association, cites \$3.5 billion in assets under management for stock funds as of March 2002. By contrast, the market capitalization of all stocks listed on the New York Stock Exchange was \$12 billion on that date. Thus, mutual fund investments represent a sizable fraction of the equity claim on the U.S. economy.

2 This trading is analyzed in a technical report by the author in Edelen, R., "Investor flows and the assessed performance of open-end fund managers," *Journal of Financial Economics*, 1999, 53, pp. 439-466. A draft is available at <http://finance.wharton.upenn.edu/~edelen/Pages/researchpage.html>.

³ See the text by J. Siegel, *Stocks for the Long Run*, Irwin Professional Publishing, 1998.; 2nd ed., McGraw Hill, 1998. See also the technical study Chordia, T., 1996, The structure of mutual fund charges, *Journal of Financial Economics*, 41, 3-39.

⁴ This is analyzed in three studies. (1) Ferson, W. and R. Schadt, 1996, Measuring fund strategy and performance in changing economic conditions, *Journal of Finance*, 51, 425-462; (2) Ferson, W. and V. Warther, 1996, Evaluating fund performance in a dynamic market, *Financial Analysts Journal* 52 (6), 20-28; and (3) Edelen, 1999, see footnote 2.

⁵ See footnote 2, Edelen, 1999.

⁶ Assume 11% expected market return, consistent with long run historical averages (see Siegel, cited above).



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